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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/651,976	08/31/2000	Yaqi Chen	TI-28222	3070

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EXAMINER	
WILLIAMS, LAWRENCE B	
ART UNIT	PAPER NUMBER
2638	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/651,976	CHEN ET AL.	
	Examiner	Art Unit	
	Lawrence B. Williams	2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 July 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *21-31* is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, 7, 9-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Wang et al. (US Patent 6,636,505 B1).

(1) With regard to claim 1, Wang et al. discloses in Fig(s) 2, 10, a communication network, comprising: a network node (Fig. 2, element 30); a first terminal (Fig. 10, element 260) having a first modem (Fig. 10, element 250) connected to said network node via a master communication loop (line to central office); and a second terminal (Fig. 10, element 260) having a second modem (Fig. 10, element 250) also connected to said network node via said master communication loop, wherein the first and second terminals are adapted to communicate with the network node and each other with signals compatible with ADSL standards (13, line 43-col. 14, line 12).

(2) With regard to claim 2, Wang et al. also discloses in Fig. 10, wherein the first terminal (260) and second terminal (260) are locally proximate one another.

(3) With regard to claim 3, Wang et al. also discloses wherein the master communication loop comprises a twisted pair of conductors (col. 13, lines 54-55).

(4) With regard to claim 7, Wang et al. also discloses wherein said first terminal and said second terminals are adapted to simultaneously communicate over said common master communication loop with said network node (col. 14, lines 37-44).

(5) With regard to claim 9, Wang et al also discloses in Fig. 2, wherein the network node is a central office located remote from the first and second terminal.

(6) With regard to claim 10, claim 10 inherits all limitations of claim 1 above. Furthermore, Wang et al. also discloses in Fig. 9, wherein the first terminal is a personal computer.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 11-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Conroy et al. (US Patent 6,459,684 B1).

(1) With regard to claim 11, Conroy et al. discloses in Fig(s). 3A, 3B, a modem adapted for use at a network node, comprising a transceiver adapted to communicate information with a remote first terminal over a master communication loop (ADSL line) with signals compatible with ADSL standard wherein said transceiver is further adapted to communicate with a second

remote terminal over said same master communication loop signals compatible with ADSL standards (col. 3, lines 18-33).

(2) With regard to claim 12, Conroy et al. also discloses in Fig(s). 3A, 3B wherein said first and second terminals are adapted to be co-located said modem being adapted to facilitate communications between each said terminal over said common master communication loop (col. 3, lines 45-59). The remote modems are both configured to communicate with the central office modem through ADSL lines (master loop) and hence can communicate with each other through the central office modem.

(3) With regard to claim 13, Conroy et al. discloses ADSL lines (Fig(s) 3A, 3B), which inherently would include the master loop comprising a twisted pair of conductors.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. (US Patent 6,636,505 B1) as applied to claim 2 above, and further in view of Conroy et al. (US Patent 6,459,684 B1).

As noted above, Wang et al. discloses all limitations of claim 2 above. Wang et al. does not explicitly teach wherein the network node is adapted to permit and enable the first terminal to communicate with the second terminal via the network node.

However, Conroy et al. teaches wherein a network node is adapted to permit and enable the first terminal to communicate with the second terminal via the network node (col. 3, lines 45-59). The remote modems are both configured to communicate with the central office modem through ADSL lines (master loop) and hence can communicate with each other through the central office modem.

It would have been obvious to one skilled in the art at the time of invention to incorporate the teachings of Conroy et al. with the teachings of Wang et al. as a method of lowering costs of ADSL implementation (col. 2, lines 53-59).

9. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. (US Patent 6,636,505 B1) as applied to claim 1 above, and further in view of Conroy et al. (US Patent 6,459,684 B1).

As noted above, Wang et al. discloses all limitations of claim 2 above. Wang et al. does not explicitly discloses wherein each said first and said second are adapted to communicate over said common master communication loop using a technique selected from the group consisting of: time division, frequency division and code division.

However, Conroy et al. discloses wherein each said first and said second are adapted to communicate over said common master communication loop using a technique selected from the group consisting of: time division, frequency division and code division (col. 7, lines 43-46).

It would have been obvious to one skilled in the art at the time of invention to incorporate the teachings of Davis with the teachings of Wang et al. as a method of lowering costs of ADSL implementation (col. 2, lines 52-59).

9. Claims 5, 6, 14-16, are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. (US Patent 6,636,505 B1) in view of Conroy et al. (US Patent 6,459,684 B1) as applied to claims 4, 12 above, and further in view of Miao et al. (US Patent 6,279,022 B1).

(1) With regard to claim 5, as noted above, Wang et al. in combination with Conroy et al. disclose all limitations of claim 4. They do not however, disclose wherein the modem establishes first terminal imitating a communication as a master maintaining a superframe. It is well-known in the art that ADSL uses a superframe. However, Maio et al. teaches imitating a communication as a master maintaining a superframe (col. 1, lines 39-60).

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to apply the method as taught by Maio et al. to modify the invention of Wang et al. in combination with Conroy et al. as a known method of synchronization between the modems for correct detection of received symbol boundaries.

(2) With regard to claim 6, Maio et al. also discloses wherein the network node directs the first terminal to maintain the superframe (col. 1, lines 39-60). It would have been obvious to one of ordinary skill in the art at the time of invention to apply the method as taught by Maio et al. to modify the invention of Wang et al. in combination with Conroy et al. as a known method of synchronization between the modems for correct detection of received symbol boundaries.

(3) With regard to claim 14, claim 14 discloses limitations similar to those of claim 5.

Therefore a similar rejection applies.

(4) With regard to claim 15, Wang et al. also discloses the first and second terminal are adapted to simultaneously communicate over a common communication loop with the network node (col. 14, lines 37-44).

(5) With regard to claim 16, claim 16 inherits all limitations of claim 15 above. Furthermore, Conroy et al. teaches discloses wherein each said first and said second are adapted to communicate over said common master communication loop using a technique selected from the group consisting of: time division, frequency division and code division (col. 7, lines 43-46).

It would have been obvious to one skilled in the art at the time of invention to incorporate the teachings of Conroy et al. as a method of lowering costs of ADSL implementation (col. 2, lines 52-59).

10. Claims 17-19, are rejected under 35 U.S.C. 103(a) as being unpatentable over Conroy et al. (US Patent 6,459,684 B1) in view of Miao et al. (US Patent 6,279,022 B1).

(1) With regard to claim 17, Conroy et al. discloses in Fig(s). 3A, 3B, a method of communicating signals with ADSL standards over a communication network comprising: a network node (300), a first terminal (306) having a first modem connected to said network node via a master communication loop (ADSL line) ; a second terminal (308) having a second modem also connected to said network node via said master communication loop, wherein said first and second terminals are adapted to communicate with said network node and each other with signals compatible with ADSL standards (col. 3, lines 18-33). Conroy et al. does not disclose the method comprising the steps of said first terminal initiating a communication towards said second

terminal via said communication master loop; and said network node directing said first terminal to maintain a superframe. However, Miao et al. discloses steps of said first terminal initiating a communication towards said second terminal via said communication master loop; and said network node directing said first terminal to maintain a superframe (col. 1, lines 39-60).

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to apply the method as taught by Maio et al. to modify the invention of Conroy et al. as a known method of synchronization between the modems for correct detection of received symbol boundaries.

(2) With regard to claim 18, Conroy et al. also discloses wherein each said first and said second are adapted to communicate over said common master communication loop using a technique selected from the group consisting of: time division, frequency division and code division (col. 7, lines 43-46).

(3) With regard to claim 19, Conroy et al. discloses ADSL lines (Fig(s) 3A, 3B), which inherently would include the master loop comprising a twisted pair of conductors.

11. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Conroy et al. (US Patent 6,459,684 B1) in view of Miao et al. (US Patent 6,279,022 B1) as applied to claim 17 and further in view of Wang et al. (US Patent 6,636,505 B1).

As noted above, Conroy et al. in combination with Maio et al. disclose all limitations of claim 17 above. They do not however explicitly disclose wherein said network node facilitates simultaneous communications between said first terminal and said second terminal over said master communication loop. However, Wang et al. discloses wherein said network node

facilitates simultaneous communications between said first terminal and said second terminal over said master communication loop (col. 14, lines 37-44).

It would have been obvious to one skilled in the art at the time of invention to incorporate the teachings of Wang et al. with the teachings of Conroy et al. in combination with Maito et al. as a method of provisioning a broadband modem.

Allowable Subject Matter

12. Claims 21-31 are allowed.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a.) Hwang et al. discloses in US Patent 6,590,893 B1 Adaptive Transmission System in a Network.

b.) Kerpez discloses in US Patent 6,430,199 B1 Method and System for Distributing Telephone and Broadband Services over the Copper Pairs Within A Service Location.

c.) Bentley discloses in US Patent 6,424,661 B1 ADSL With RF POTS Overlay.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence B Williams whose telephone number is 571-272-3037. The examiner can normally be reached on Monday-Friday (8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on 571-272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lawrence B. Williams

lbw
September 19, 2005

EMMANUEL BAYARD
PRIMARY EXAMINER